REMARKS

Claims 1-23 and 120-126 are pending in this application.

Rejection Under 35 U.S.C. § 101 of Claims 1-23

The Examiner rejects **claims 1-23** under 35 U.S.C. § 101 arguing that they do not recite subject matter within one of the statutory classes.

Claim 1

The Examiner argues that **claim** 1 does not recite subject matter within one of the statutory classes.

We have amended the preamble of claim 1 to use language more consistent with claim 126, which has passed muster as patentable subject matter. Amendment of the body of claim 1 ties particular instances of display fixtures, identified by name, for example "front table", to the presentation quantity determination. Another amendment makes it absolutely clear that the causal calendar is stored in memory, as well as being used by computer programs.

Claim 1 recites a pair of functional data structures in memory, in a form which has been approved as statutory subject matter. *In re Lowry*, 32 F.3d 1479, 1581 (Fed. Cir. 1994), which is cited with approval in the examination guidelines incorporated into MPEP § 2106.01 at 2100-17 (Ver. 8, Rev. 6, Sept. 2007 and republished as part of Rev. 7, July 2008); *see also*, *In re Warmerdam*, 33 F.3d 1354, 1360-61, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994) (claim 5, data structure in machine memory[1] "clearly patentable subject matter", even though method by which data structure was made was not statutory subject matter).

The wherein clause of claim 1 specifies the functionality of the data structures and is not intended to cross the line into the process class of claims.

The Examiner correctly acknowledges that the data structure is functional. (OA at 3, line 4) A functional data structure in memory is patentable subject matter under *Lowry* and *Warmerdam*. Data structures not claimed as embodied in computer-readable media are not functional, because they cannot cause functional change in a computer. MPEP § 2106.1 (I) at 2100-18, citing *Warmerdam*. These data structure are

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[1] The text of claim 5, recited at 1358, was "5. A machine having a memory which contains data representing a bubble hierarchy generated by the method of any of Claims 1 through 4." The Federal

functional because <u>the claim specifies that they are in computer memory and functionally used by a forecasting program</u> to produce output that, subsequently, is used by analysis programs to generate analytical reports that support retailing activities.

Therefore, claim 1 should not be rejected under § 101.

<u>Claims 2-23</u>

The Examiner argues that **claims 2-23** do not recite subject matter within one of the statutory classes. However, they depend from claim 1, which we demonstrate above is in a form approved as "patentable subject matter."

Therefore, claims 2-23 should not be rejected under § 101.

Applicants respectfully submit that the rejection of claims 1-23 under § 101 should be withdrawn.

Rejection Under 35 U.S.C. § 112 of Claims 1-23 and 120-125

The Examiner rejects **claims 1-23 and 120-125** under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and claim the subject matter which applicant regards as the invention.

<u>Claim 1</u>

The Examiner asks for clarification of the relationship between the preamble and body of the claim, particularly regarding the statutory class of **claim 1.** The preamble recites an environment in which the claimed data structures functionally improve the operation of a computer system that runs forecasting and analysis programs to generate analytical reports that support retailing activities. The preamble recites a machine and the claim elements recite a data structure residing in memory used to functionally control the operation of the machine. Whether this data structure is an article of manufacture or a machine is not clear from the applicable court decisions, but it is clear that this form of claim is "patentable subject matter." *Compare Lowry,* at 1582 (near top, "article of manufacture") *to Warmerdam*, at 1360 (machine; "clearly patentable subject matter"). Because the preamble merely recites an environment in which the claimed data structure is useful, we do not understand the relevance of statutory class analysis to the preamble.

Circuit declared that this claim was "clearly patentable subject matter". *Id.* at 1360 (following heading "2").

Therefore, claim 1 should not be rejected under § 112.

Claims 2-23

Following the clarification given above, claims 2-23 should not be rejected under § 112.

Claims 120-125

The Examiner argues that **claims 120-125** are indefinite for failing to particularly point out and claim the subject matter which applicant regards as the invention.

The Examiner focuses on the word "selected", which we have amended to read "selector." The antecedent basis for "presentation demand type selector" is found verbatim in claim 126.

Therefore, claims 120-125 should not be rejected under § 112.

Applicants respectfully submit that the rejection of claims 1-23 and 120-125 under § 112 should be withdrawn.

Allowability of Claims 126 and 120-125

We appreciate the Examiner's repeated indication that claim 126 is allowable. We have amended it to put the steps in a more readable order, without intending to require that the steps be executed in any particular order except as required by dependencies among the claim elements. We trust that this simple reordering of steps will not diminish the allowability of claim 126.

We have overcome the § 112 antecedent basis issues for claims 120-125, also placing them in condition for allowance.

Rejection Under 35 U.S.C. § 103(a) of Claims 1-23

The Examiner rejects **claims 1-23** under 35 U.S.C. § 103(a) as unpatentable over Landvater (U.S. 6,609,101).

Preliminarily, we apologize if our comment on the amendment of claim 1 was misunderstood. We never asserted that claim 1 should be allowed on the basis of an agreement, as Examiner Jeanty reserved further consideration of that claim. We meant to be understood as adapting into claim 1 the same elements that Examiner Jeanty urged us to incorporate into claim 126, thereby making claim 126 allowable.

Claim 1

Claim 1 includes the limitations:

An improvement to a management decision support system, including a computer system having memory and resources, a retail demand forecasting program applying one or more forecasting approaches, running on the computer system and generating output, and a set of analysis programs running on the computer system and utilizing which utilize the output to generate analytical reports that support retailing activities, the improvement comprising:

a presentation demand calendar stored in memory and utilized by the forecasting program to generate the output, said presentation demand calendar associating with a plurality of good-selling location pairs, data including a good identifier, a selling location identifier, one or more presentation quantities each associated with a start date and a stop date, and a presentation demand type selector that selects one of a plurality of alternative extents to which the good can be sold out of the presentation quantity between the start date and the stop date; and

a schedule stored in the memory of display fixtures, including fixture counts and fixture capacities in the plurality of locations, further including fixture identifiers for a plurality of fixture types and quantities of the fixtures present at particular selling locations;

wherein particular presentation events are associated with use of particular instance of display fixture types, identified using the fixture identifiers, to display particular items and at least some of the presentation quantity requirements utilized by the forecasting program are derived from the use of the particular instance of the display fixture type to display the particular items.

These limitations are not found in Landvater.

We agree with the Examiner that it is well known in the retail industry to manually remodel stores and use schedules of fixture types for store resets. (OA at 7, lines 6-7) However, that does read on using fixture identifiers for particular instance of display fixture types in a data structure in computer memory.

The Examiner's obviousness argument mistakenly asserts that our use of display fixtures to determine presentation quantity requirement is "non-functional." (OA at 7, line 8) The Examiner is using a mistaken notion of "non-functional" and is misreading the claim. We refer to MPEP § 2106.1 (I) at 2100-18, citing *Warmerdam*, which explains that a data structure is "non-functional" when claimed abstractly, as opposed to being functional when claimed in computer memory. "Data structures <u>not</u> claimed as

embodied in computer-readable media are <u>not</u> functional, <u>because</u> they cannot cause functional change in a computer." *Id.* (underlining added for emphasis). "<u>Only when</u> the claimed invention taken as a whole is directed to a <u>mere program listing</u>, i.e., to only its description or expression, is it descriptive material *per se* and hence nonstatutory." *Id.* Turning to our claim, these data structures are functional because <u>the claim specifies that they are in computer memory and functionally used by a forecasting program</u>, which produces output that is used by an analysis program to generate analytical reports that support retailing activities. The Examiner's mistaken classification of our data structures as non-functional should lead to reconsideration of the obviousness rejection. As in *Lowry*, the Examiner has made the mistake of failing to give weight toward patentability to our functional data structure.

The Examiner's motivation for modifying Landvater to include the missing elements (OA at 6, acknowledging elements not disclosed) is to "more accurately calculate the stock replenishments needed to maintain attractive displays". (OA at 7) We teach and claim adding a new layer of abstraction that uses fixture identifiers to essentially name instances of fixtures, so that similarly named fixtures can be used in different locations in different stores. The new abstraction layer does nothing to increase the accuracy of stock replenishments – the Examiner has not said why she thinks that accuracy would be increased by a new abstraction layer or how that relates to Landvater "as a whole." 35 U.S.C. § 103(a) ("the subject matter <u>as a whole</u>"); MPEP §§ 2106 at 2100-8 (need to examine "the claim <u>as a whole</u>", because even a combination of known elements may be patentable), 2116.01 at 2100-54 (emphasizing "highly fact-dependent analysis involving taking the claimed subject matter <u>as a whole</u> and comparing it to the prior art").

On page 10 of the application, we explained:

> One way of associating presentation quantities with a good at a selling location is to create a unique name for a particular fixture, promotional display point or other mode of presentation. A set of named fixtures are then associated with each selling location. When the layout of a selling location changes, different named fixture can be associated with the location. Fixture setups are associated with the fixtures for particular goods and periods of time. The named fixture setups can be assigned specific quantities (capacities) of goods per fixture setup or fixtures can be assigned different good quantities per fixture for different periods of time. The end result is that

the system takes into account the capacities of named fixtures and the
number of named fixtures at each selling location when it calculates
presentation quantities. For good selling location pairs, one or more of the
available setups at the selling location can be allocated to the good. In this
approach, the system can calculate the presentation quantity from
assignment of goods to particular setups in particular fixtures.

This disclosure teaches something very useful to retail chains. *Applic.* at 3, lines 7-8.

The Examiner undoubtedly has visited malls where familiar stores appear in a variety of

layouts – think of how may sizes and shapes of Starbucks coffee shops there are.

Because Landvater does not address the problem disclosed in our application

and solved in our claim and because adding an abstraction layer does <u>not</u> increase

Landvater's accuracy, the § 103 rejection should be withdrawn. We see no basis, other

than using our claims as a roadmap or blueprint, for modifying Landvater to include the

data structures in claim 1.

Therefore, claim 1 should be allowable over Landvater.

<u>Claims 2-23</u>

Claims 2-23 should be allowable over Landvater for at least the same reasons

as amended claim 1.

CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims as now stated.

Applicants would welcome an interview, if the Examiner is so inclined. The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 a.m. to 5:30 p.m. PST, Monday through Friday, and can be reached at his cell phone at (415) 902-6112 most other times.

Fee Authorization. The Commissioner is hereby authorized to charge underpayment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 50-0869 (BLFR 1005-1).

Respectfully submitted,

Dated: August 26, 2008   /Ernest J. Beffel, Jr./
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